

OLLSCOIL na hÉIREANN, GAILLIMH
NATIONAL UNIVERSITY OF IRELAND, GALWAY

SEMESTER I EXAMINATIONS, 2002/2003

THIRD UNIVERSITY EXAMINATIONS IN ARTS

GEOGRAPHY

TI 311 Advanced GIS

Professor M. Dunford
Dr. C. Zhang
Professor U. Strohmayer

Time allowed: 1.5 hours

Answer one question from **Section A** and one question from **Section B**, two in total.

SECTION A

1. What are the functions of ArcView extension Network Analyst? Please provide examples of the possible applications.
2. What are the functions of ArcView extension Spatial Analyst? Please provide examples of the possible applications.

SECTION B

3. Discuss network analysis with reference to the basic elements of a network, network representation, network operations and its application areas.
4. How can spatial interpolation procedures be classified? Please explain five methods of point-based interpolation.
5. What is DEM and what are its applications?
6. Discuss data quality measurement and assessment in GIS.
7. What are the types of errors, and the sources of inaccuracy and imprecision in GIS?
8. What is visualization? Discuss visualization in GIS with reference to the graphic output hardware, the concept of a map, and graphic variables.